

Impact of BrainWare SAFARI on Progress in Reading  
Coleman Academy – 2007-2008 School Year



### Implementation

Following an initial pilot at the Edgar Evans Academy in the spring of 2006, the Indianapolis Public Schools decided to implement BrainWare Safari at another school, the Coleman Academy, during the 2007-2008 school year. In the 2006 pilot, the students who used BrainWare Safari improved their performance on the Woodcock-Johnson® III Cognitive Battery by six years on average over 11 weeks of using the program. In the 2007 implementation, the goal was to assess the impact of the program on academic and behavioral measures.

Students in the 4<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> grades at Coleman Academy were to use the program between February and May of 2008, with a goal of 36 sessions for each student. The impact of the program on academic progress in reading and on behavior was to be measured using DIBELS® testing, teacher evaluations and the students' data books.

Actual use of the program was measured by data collected through BrainWare Safari. The students at Coleman Academy completed an average of 14 sessions, far less than the target. Only one class, the 4<sup>th</sup> Grade Girls class, met the target usage. That class completed an average of 45 sessions, with a minimum of 33 sessions. Other than the 4<sup>th</sup> Grade Girls, only one student completed more than 25 sessions; that was a 7<sup>th</sup> Grade Boy with 26 sessions. The 4<sup>th</sup> Grade Girls completed 130±21 of the 168 levels in BrainWare Safari (a minimum of 72 and a maximum of 162). The number of levels completed during this time frame is consistent with the level completion rate over similar time periods in previous studies with BrainWare Safari.

### DIBELS® Test Results

The 4<sup>th</sup> Grade Girls' average score at the beginning of the year was 96±28 (3 points above benchmark). At mid-year, the average score improved to 114±28 (9 points above benchmark). At the end of the year, following their use of BrainWare Safari, the average score reached 144±36 (26 points above benchmark).

As the chart on the following page illustrates, the 4<sup>th</sup> Grade Girls class was the only class that exceeded the benchmark score for their grade at the end of the year.<sup>1</sup> In fact, their average score exceeded that of any other class on an absolute basis, not just relative to the benchmark. The rate of progress also accelerated during the second half of the year, from an 18-point improvement at mid-year to a 30-point improvement from the mid-year to the end-of-year test.

The minimum score for the 4<sup>th</sup> Grade Girls at the end of the year was 88, significantly higher than any other class (22 to 64). At the beginning of the year, the 4<sup>th</sup> Grade Girls' minimum score of 66 was commensurate with the minimum in other grades (18 to 66). Thus, the entire 4<sup>th</sup> Grade Girls class participated more uniformly in the growth experienced during the second half of the year. Furthermore, this was the only class in which 100% of the students for whom all three test scores area available increased their DIBELS scores over the course of the year.

While the school overall experienced a negative trend in terms of the classification of students according to risk over the year (fewer students in the Low Risk category and more in the At Risk category), the 4<sup>th</sup> Grade Girls ended the year with 9 of 11 students in the Low Risk category. The other two, who finished the year in the At Risk category, were much closer to moving into the Some Risk Category – with one 2 points away and the other 8 points away.

Of the students at Coleman, two had previously been at Edgar Evans Academy and had participated in the earlier pilot of BrainWare Safari. Both boys, one in 6<sup>th</sup> grade and one in 7<sup>th</sup>, tested significantly above benchmark at every test during the year, with final DIBELS scores of 145 and 214 respectively.

### Teacher Evaluations

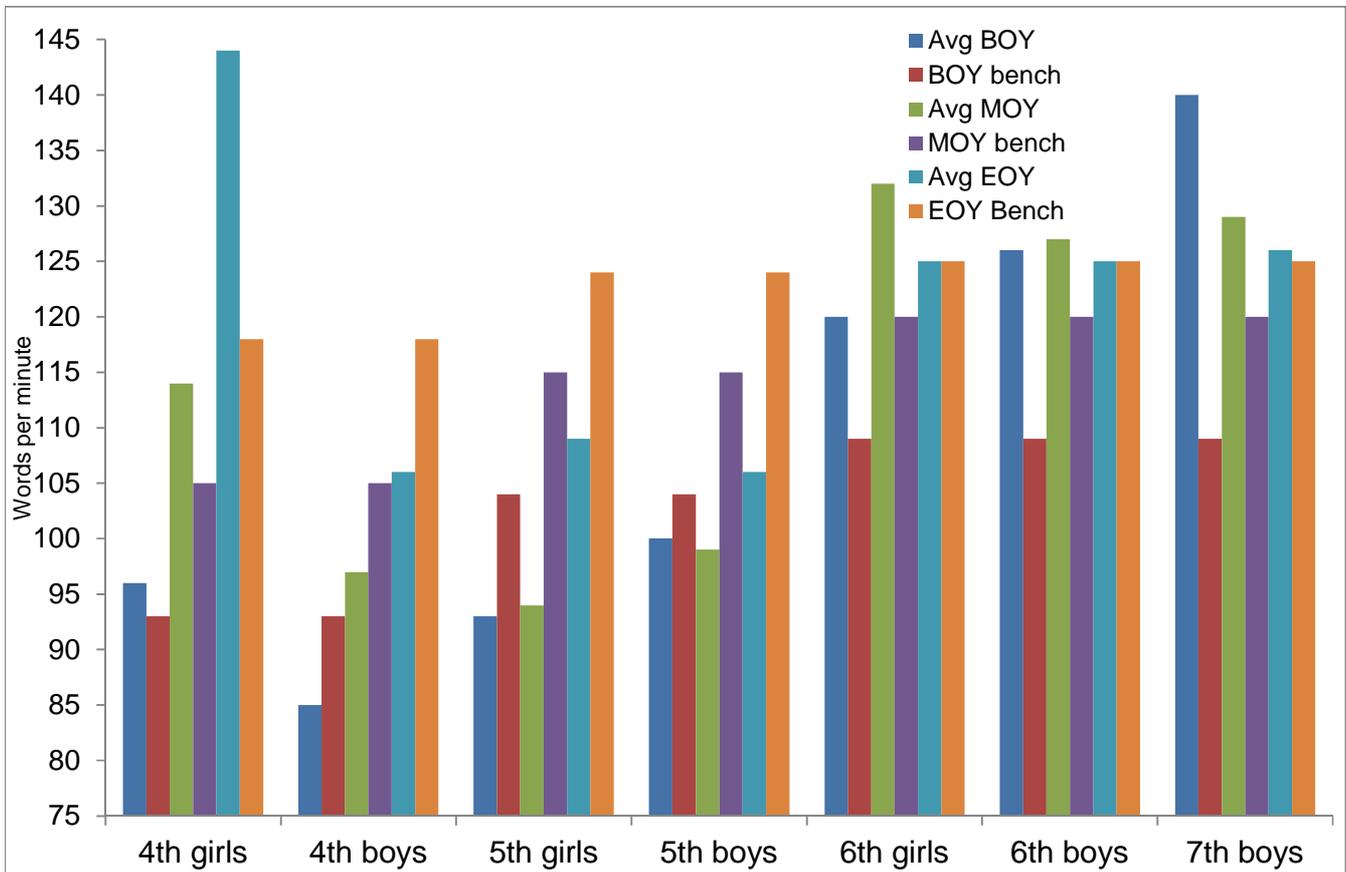
Six teachers, including the 4<sup>th</sup> Grade Girls' teacher, completed survey questionnaires designed to elicit feedback on areas of improvement noted among the students. The only improvements on any measure noted by the teachers were for the 4<sup>th</sup> Grade Girls class. Improvements for the class were noted in:

- Making fewer careless errors
- Memory
- Grasping new concepts
- Communication with parents, peers and teachers

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The principal of the school noted that fewer behavior problems were evidenced when the students were using BrainWare Safari. Some of the older students were resistant to using the program, as they perceived it to be for younger students. Behavior was not consistently tracked in the data books for the 6<sup>th</sup> grade, and no conclusions could be drawn.



**DIBELS Scores by Grade and Test Administration**

**Conclusions and Implications**

When implemented properly, the students at Coleman Academy who used BrainWare Safari performed better on benchmark reading tests than students who did not use the program. The students reached a higher average level of achievement than any class in the school, including classes three years ahead of them. Their rate of progress on the test accelerated during the half of the year when BrainWare was used. The variability of results was lower than for other classes at the end of the year, indicating that students at the lower end of the performance range were not being left behind to the extent they were in other classes. The teacher noted positive changes in the students’ ability to avoid careless errors, to grasp new concepts and to communicate with parents, peers and teachers, as well as improvements in memory. Teachers in other classes did not note any such behavioral improvements.

The results reinforce earlier work and clearly point out how important fidelity of implementation is. Implementation of BrainWare Safari requires 30 to 60 minutes 3 to 5 times per week over 8 to 12 weeks. In the case of the 4<sup>th</sup> Grade Girls at Coleman Academy, an investment of approximately 30 hours over the course of a semester yielded dramatically improved reading results as well as improvements in selected behaviors related to cognitive growth.

<sup>i</sup> DIBELS end of year benchmarks: 4th – 118, 5<sup>th</sup> – 124, 6<sup>th</sup> – 125, 7<sup>th</sup> – used 6<sup>th</sup> grade benchmarks.